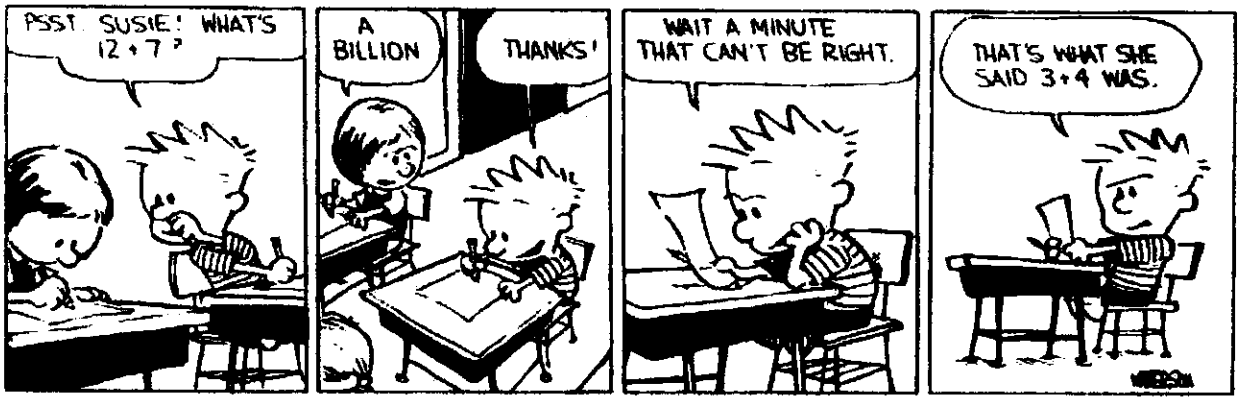
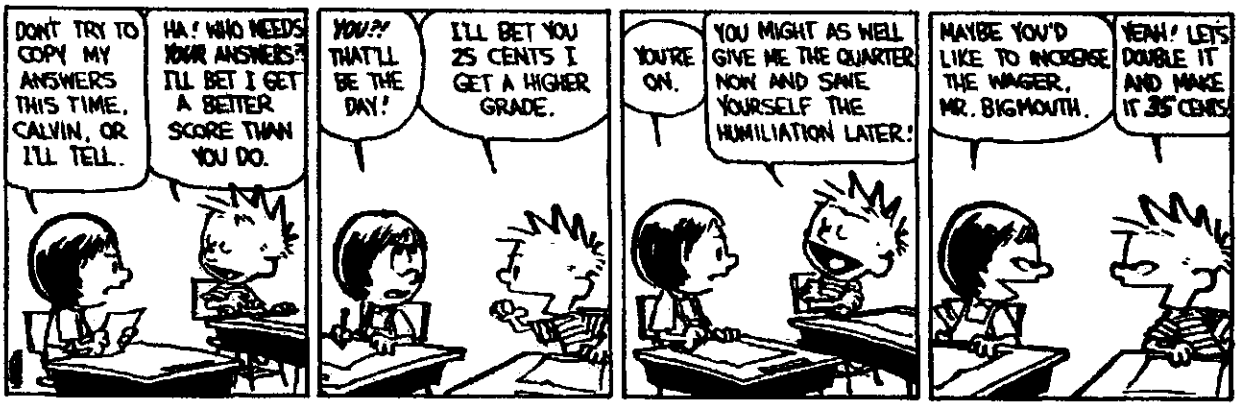
Equations of Lines
Unit 3

Section	Topic	Assignment	Packet Page Number
1.2	Finding Slope	Kuta Finding Slope from two points Kuta Finding Slope from a graph Finding Slope from an equation P17 #19-35	1-2 3-4 5-6
1.3	Writing Linear Equations	Kuta Writing Linear Equations (graphs) Kuta Writing Linear Equations (equations) P26 #10-31, #35-52	7-8 9-10
1.2	Graphing Lines	Kuta Graphing Lines slope intercept form Kuta Graphing Lines from standard form P18 #40-63	11-12 13-14
3.3	Graphing Linear Inequalities	Kuta Graphing Linear Equations	15-16
		Review	17,18,19
		Test	


"A BUSHEL IS A UNIT OF WEIGHT EQUAL TO FOUR PECKS."
WHAT'S A PECK?
A QUICK SMOOCH.
YOU KNOW, I DON'T UNDERSTAND MATH AT ALL.


PSST. SUSIE! WHAT'S 12+7?
A BILLION
THANKS!
WAIT A MINUTE THAT CAN'T BE RIGHT.
THAT'S WHAT SHE SAID 3+4 WAS.


DON'T TRY TO COPY MY ANSWERS THIS TIME, CALVIN, OR I'LL TELL.
HA! WHO NEEDS YOUR ANSWERS? I'LL BET I GET A BETTER SCORE THAN YOU DO.
YOU?! THAT'LL BE THE DAY!
I'LL BET YOU 25 CENTS I GET A HIGHER GRADE.
YOU'RE ON.
YOU MIGHT AS WELL GIVE ME THE QUARTER NOW AND SAVE YOURSELF THE HUMILIATION LATER!
MAYBE YOU'D LIKE TO INCREASE THE WAGER, MR. BIGMOUTH.
YEAH! LET'S DOUBLE IT AND MAKE IT 35 CENTS.


PSSST! WHAT'S 7·6?
THREE HUNDRED BILLION GAZILLION.
OH, THANKS FOR THE BIG HELP!
THAT'S A THREE, FOLLOWED BY 85 ZEROES
AH! I KNEW THAT

Kuta Software - Infinite Algebra 1 Name_____

Finding Slope From Two Points

Date_____ Period____

Find the slope of the line through each pair of points.

1) (19, −16), (−7, −15)

2) (1, −19), (−2, −7)

3) (−4, 7), (−6, −4)

4) (20, 8), (9, 16)

5) (17, −13), (17, 8)

6) (19, 3), (20, 3)

7) (3, 0), (−11, −15)

8) (19, −2), (−11, 10)

1

9) $(6, -10), (-15, 15)$

10) $(12, -18), (-15, -18)$

11) $(3, -20), (5, 8)$

12) $(15, 8), (-17, 9)$

13) $(-19, 12), (-9, 1)$

14) $(12, 2), (-7, 5)$

15) $(6, -12), (15, -3)$

16) $(9, 3), (19, -17)$

Kuta Software - Infinite Algebra 1

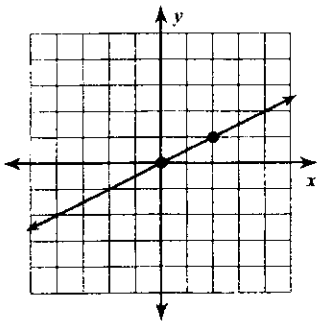
Name_____

Finding Slope From a Graph

Date_____ Period____

Find the slope of each line.

1)



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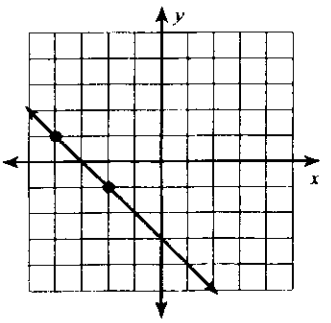

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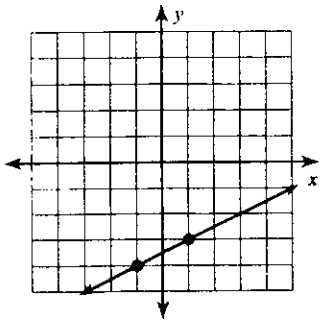

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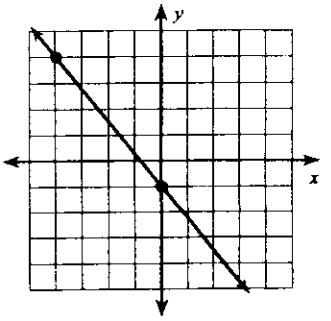

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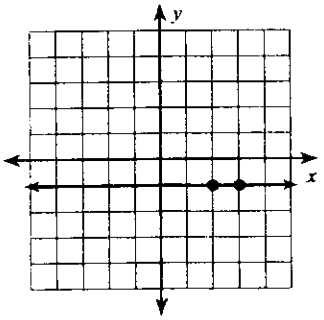

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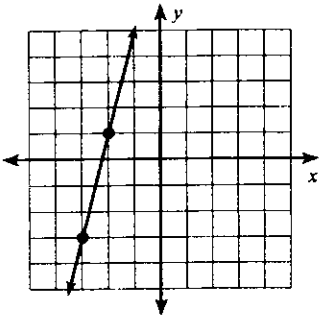

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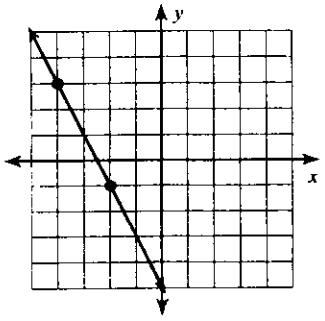

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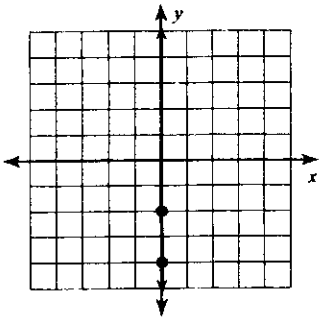

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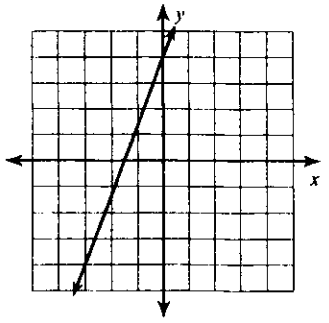
9)



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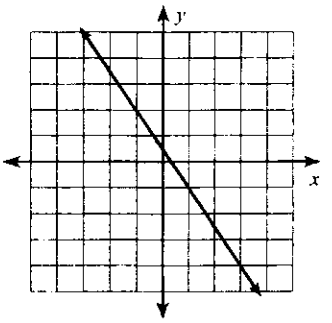

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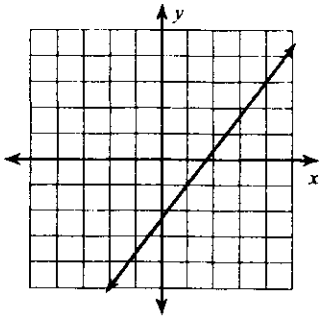

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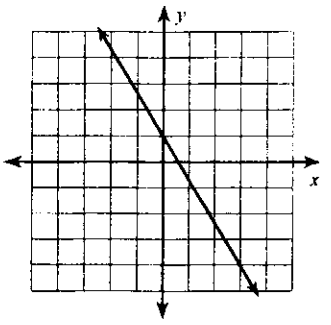

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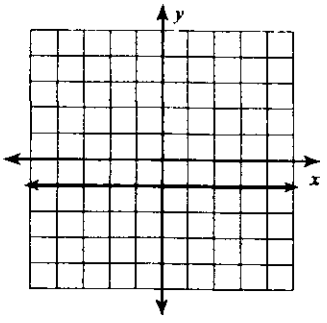

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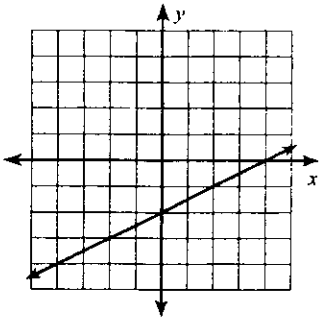

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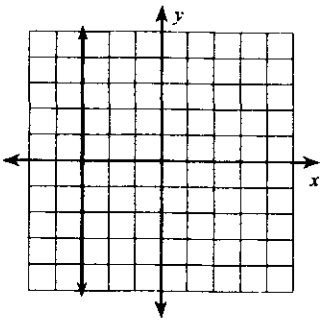

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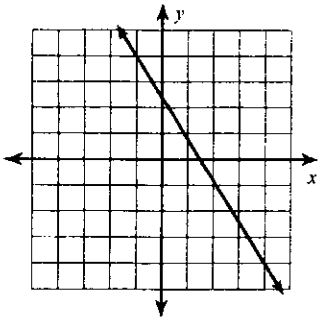


4

Kuta Software - Infinite Algebra 1

Name_____

Finding Slope From an Equation

Date_____ Period____

Find the slope of each line.

1) $y = -\frac{5}{2}x - 5$

2) $y = -\frac{4}{3}x - 1$

3) $y = -x + 3$

4) $y = -4x - 1$

5) $2x - y = 1$

6) $x + 2y = -8$

7) $8x + 3y = -9$

8) $4x + 5y = -10$

9) $x - y = -2$

10) $4x - 3y = 9$

5

11) $3x + 2y = 6$

12) $4x - 5y = 0$

13) $y = -1$

14) $x + 5y = -15$

15) $-2y - 10 + 2x = 0$

16) $x + 5 + y = 0$

17) $3x + 20 = -4y$

18) $-15 - x = -5y$

19) $-1 = -2x + y$

20) $-x - 1 = y$

21) $0 = 5y - x$

22) $-30 + 10y = -2x$

Kuta Software - Infinite Pre-Algebra

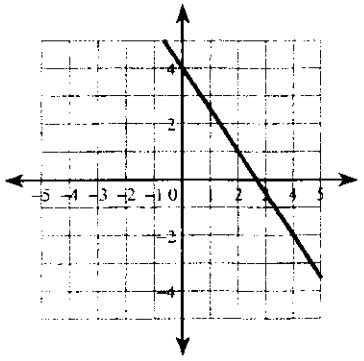
Name_____

Writing Linear Equations

Date_____ Period____

Write the slope-intercept form of the equation of each line.

1)



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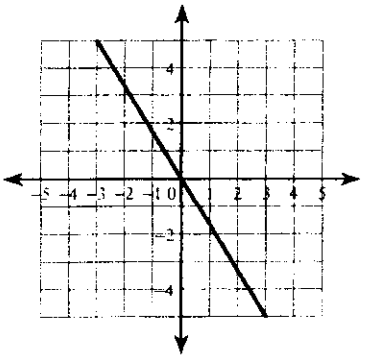

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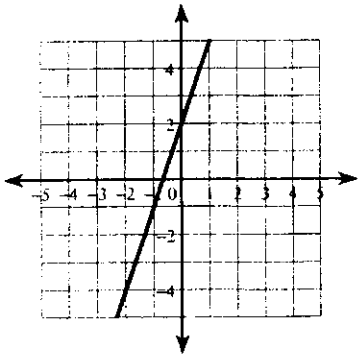

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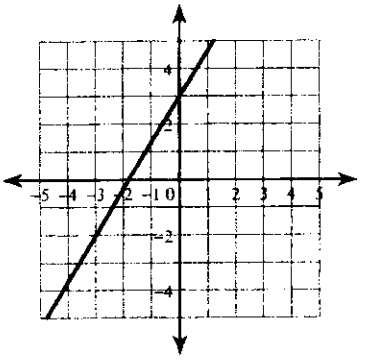

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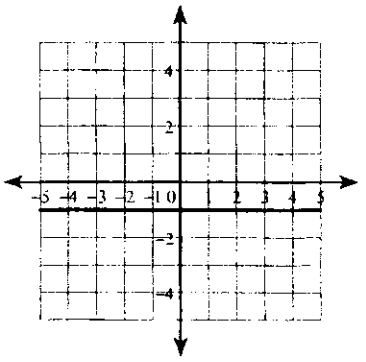

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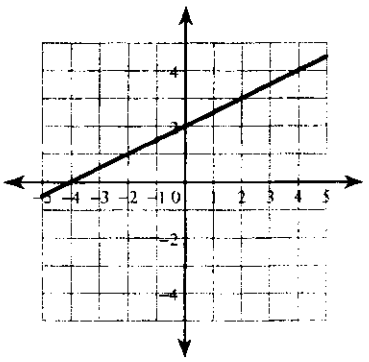

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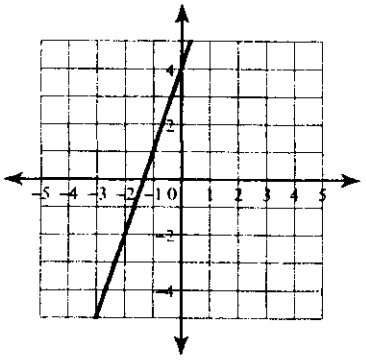

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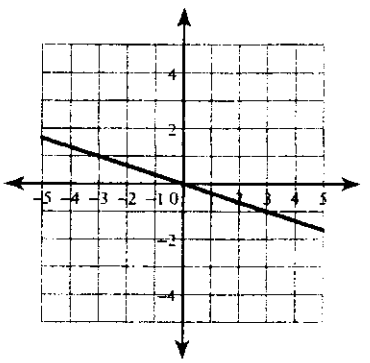


8

 Name_____

Writing Linear Equations

Date_____ Period____

Write the slope-intercept form of the equation of each line.

1) $3x - 2y = -16$

2) $13x - 11y = -12$

3) $9x - 7y = -7$

4) $x - 3y = 6$

5) $6x + 5y = -15$

6) $4x - y = 1$

7) $11x - 4y = 32$

8) $11x - 8y = -48$

Write the standard form of the equation of the line through the given point with the given slope.

9) through: $(1, 2)$, slope $= 7$

10) through: $(3, -1)$, slope $= -1$

11) through: $(-2, 5)$, slope $= -4$

12) through: $(3, 5)$, slope $= \frac{5}{3}$

9

13) through: $(2, -4)$, slope $= -1$

14) through: $(2, 5)$, slope = undefined

15) through: $(3, 1)$, slope $= \frac{1}{2}$

16) through: $(-1, 2)$, slope = 2

Write the point-slope form of the equation of the line described.

17) through: $(4, 2)$, parallel to $y = -\frac{3}{4}x - 5$

18) through: $(-3, -3)$, parallel to $y = \frac{7}{3}x + 3$

19) through: $(-4, 0)$, parallel to $y = \frac{3}{4}x - 2$

20) through: $(-1, 4)$, parallel to $y = -5x + 2$

21) through: $(2, 0)$, parallel to $y = \frac{1}{3}x + 3$

22) through: $(4, -4)$, parallel to $y = -x - 4$

23) through: $(-2, 4)$, parallel to $y = -\frac{5}{2}x + 5$

24) through: $(-4, -1)$, parallel to $y = -\frac{1}{2}x - 1$

(10)

Kuta Software - Infinite Algebra 1

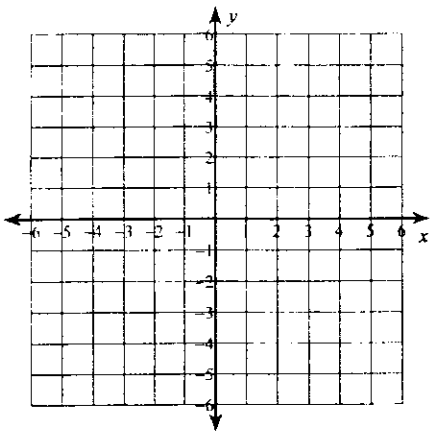
Name_____

Graphing Lines

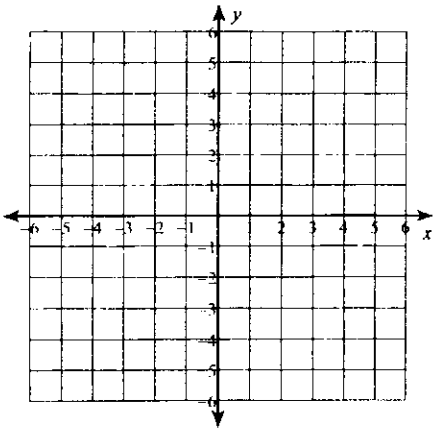
Date_____ Period____

Sketch the graph of each line.

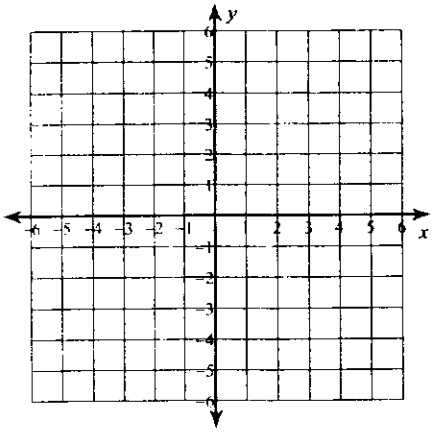
1) $y = \frac{7}{2}x - 2$



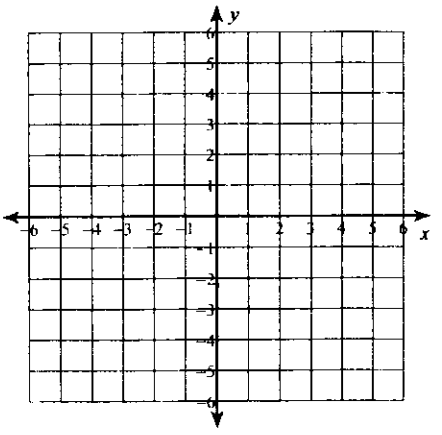
2) $y = -6x + 3$



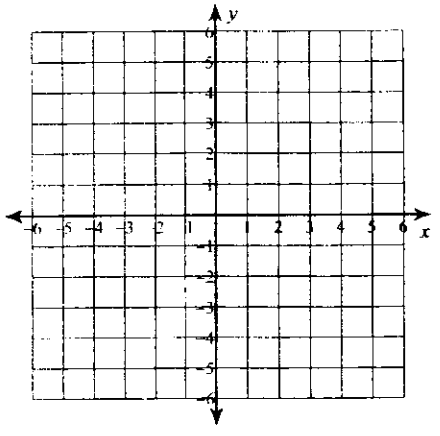
3) $y = -5$



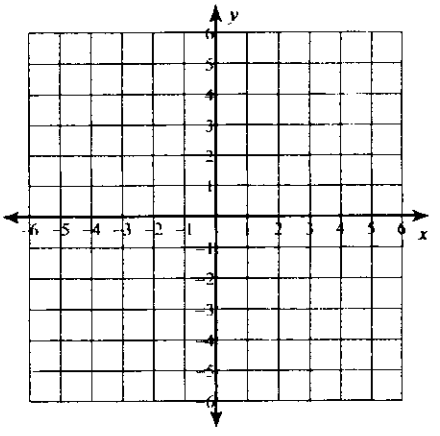
4) $y = \frac{6}{5}x + 1$



5) $y = \frac{1}{4}x + 2$



6) $x = 5$



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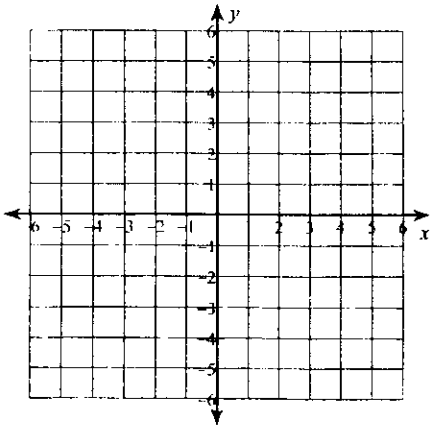
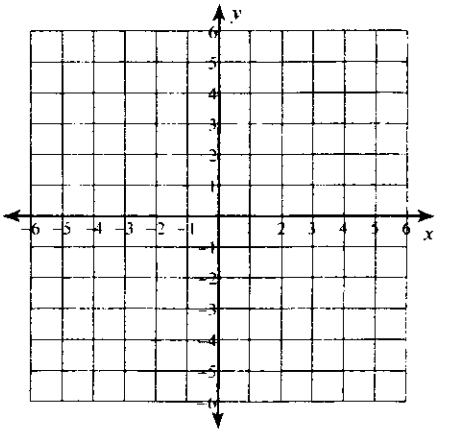
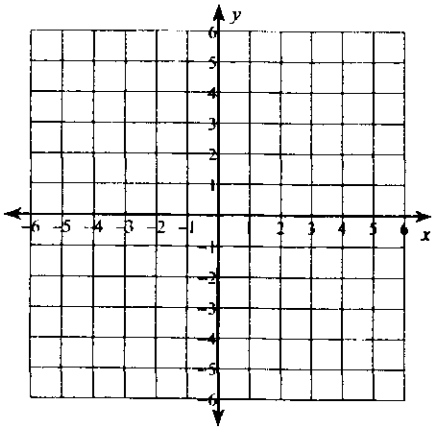
7) $y = \frac{5}{3}x$



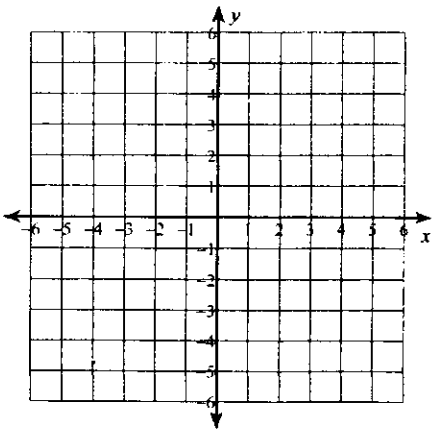
8) $x = 0$



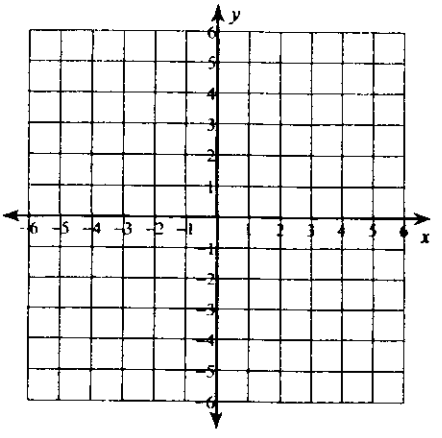
9) $y = -\frac{1}{3}x + 3$



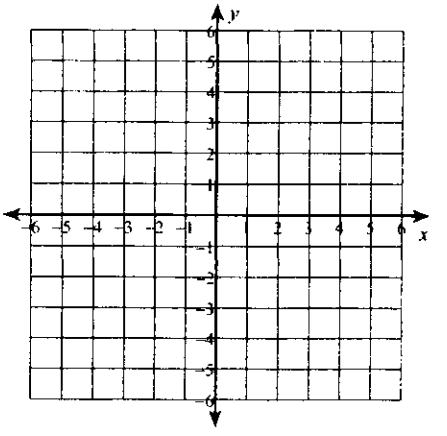
10) $y = \frac{1}{5}x - 4$



11) $y = \frac{1}{2}x - 2$



12) $y = 2x + 5$



12

Kuta Software - Infinite Algebra 1

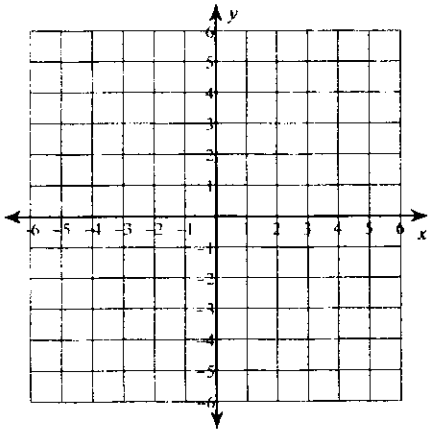
Name_____

Graphing Lines

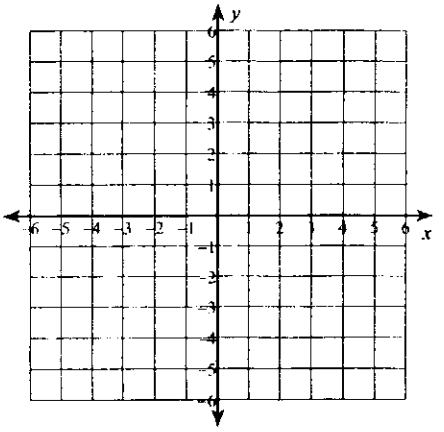
Date_____ Period____

Sketch the graph of each line.

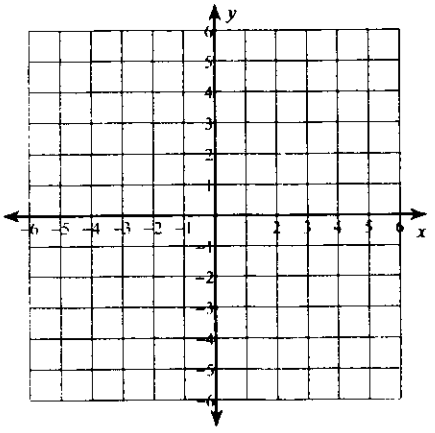
1) $7x + y = 5$



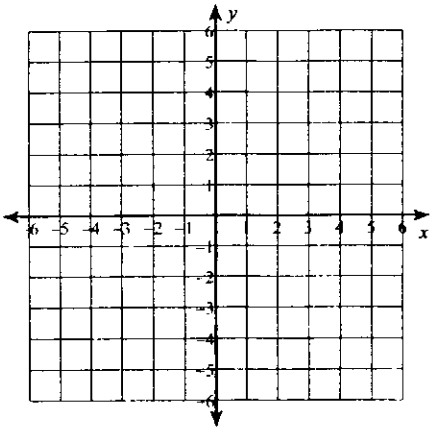
2) $3x + 5y = -5$



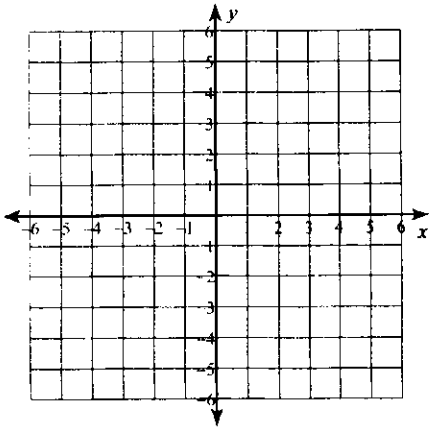
3) $y = 4$



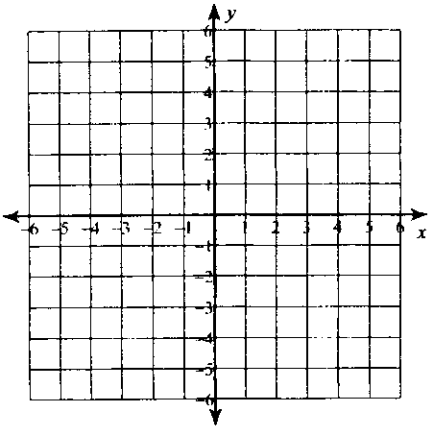
4) $6x + 5y = 20$



5) $x = -3$

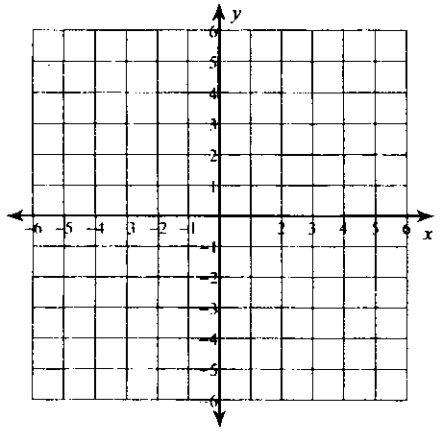


6) $2x + y = 4$

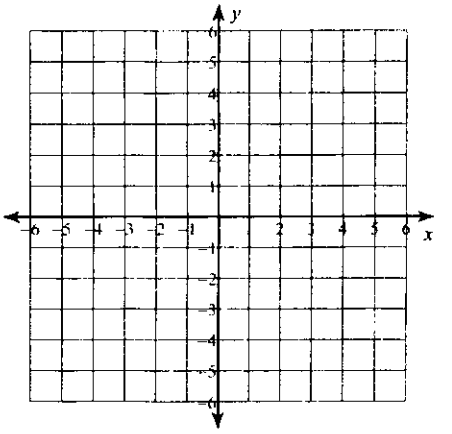


13

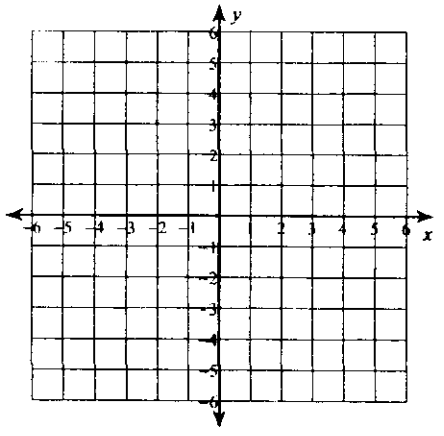
7) $x + y = 3$



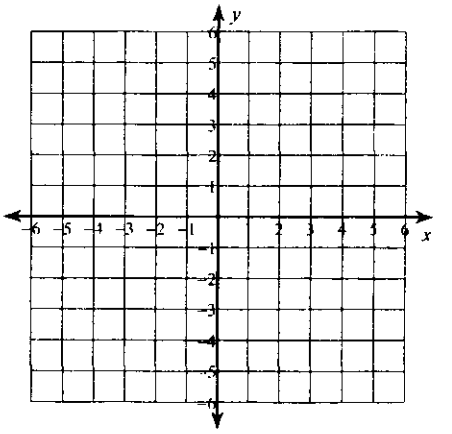
8) $10x - 3y = 15$



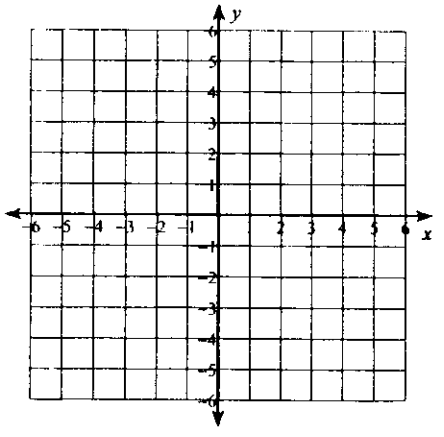
9) $x - y = 3$



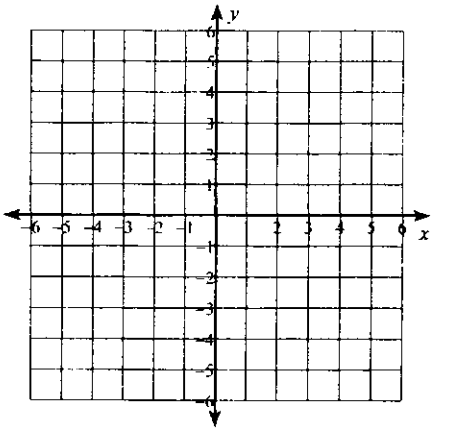
10) $y = 0$



11) $x + y = -3$

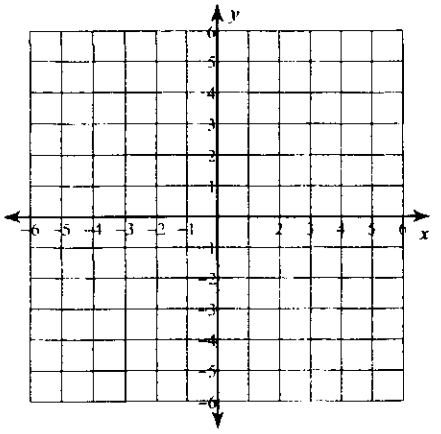


12) $x + y = -1$

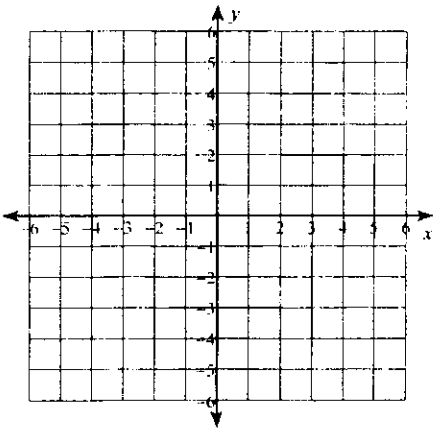


(14)

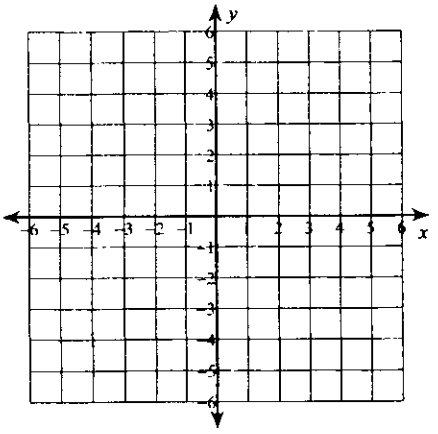
7) $x < -5$



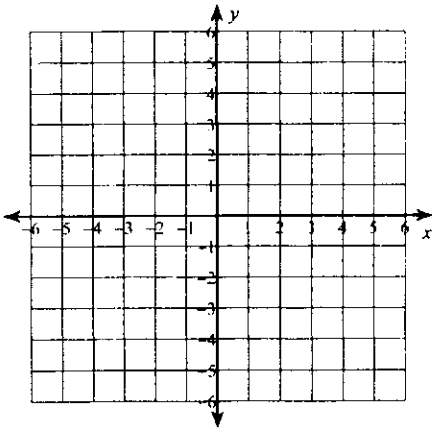
8) $y \leq \frac{4}{3}x - 4$



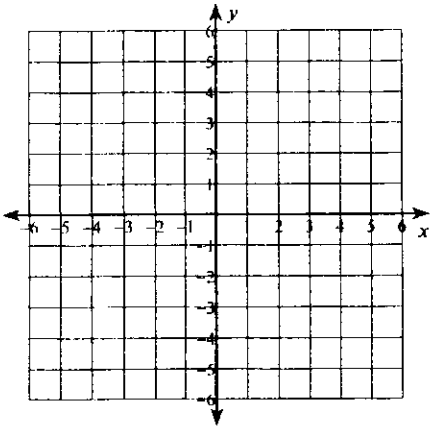
9) $3x - 2y < 10$



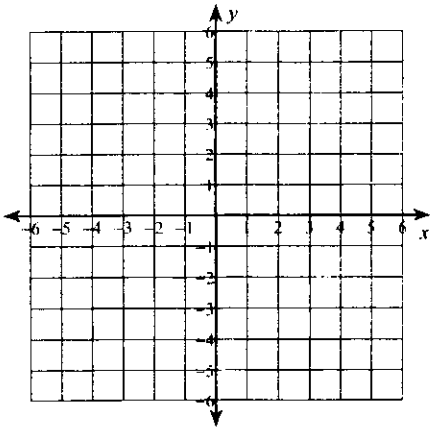
10) $5x - 3y \leq -15$



11) $y \geq 4$



12) $x - y > 2$



16

Kuta Software - Infinite Algebra 1

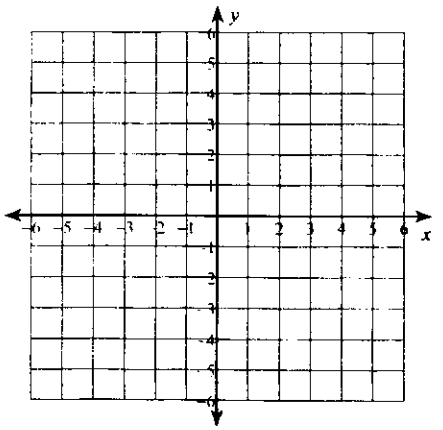
Name_____

Graphing Linear Inequalities

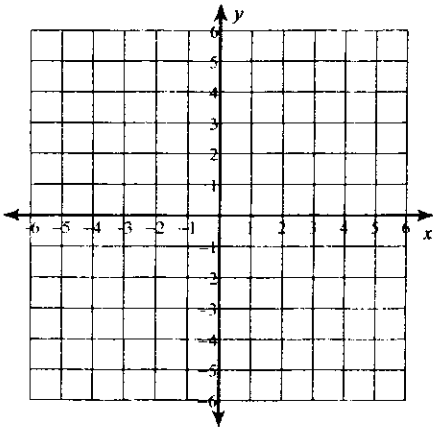
Date_____ Period____

Sketch the graph of each linear inequality.

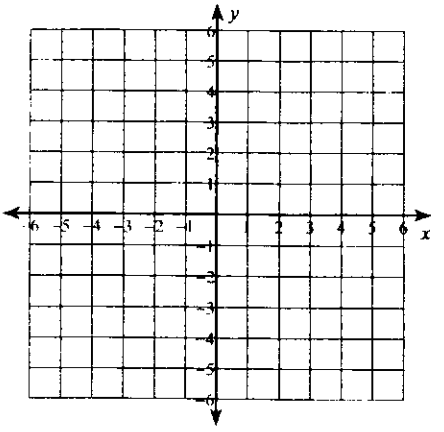
1) $y \geq -3x + 4$



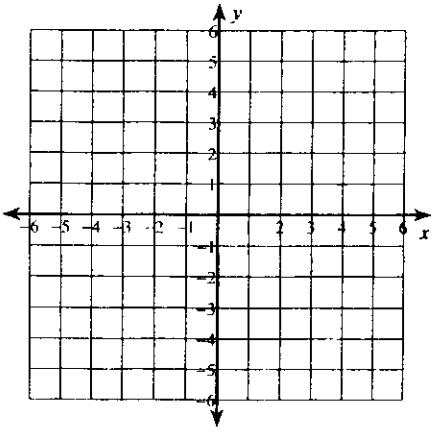
2) $y \leq \frac{3}{5}x - 5$



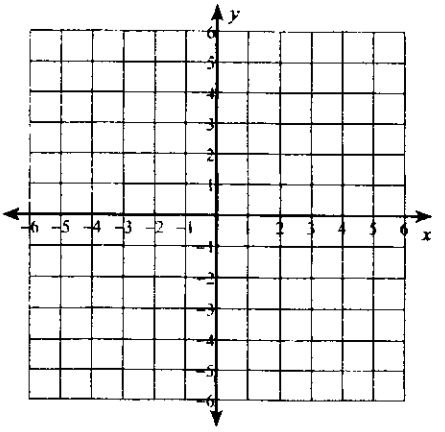
3) $y > -x - 5$



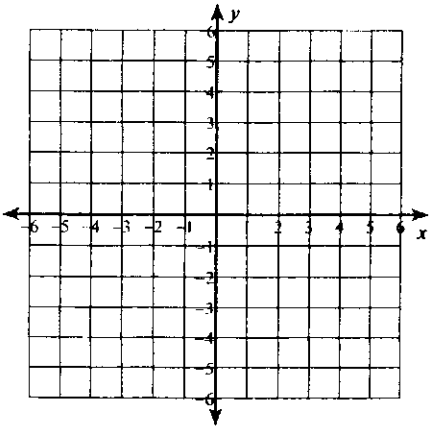
4) $y > -4$



5) $y > 2x - 5$



6) $y \geq \frac{7}{4}x + 2$



15

Review 1 of 3

Quick Warm-Up (for use before Lesson 1.2)

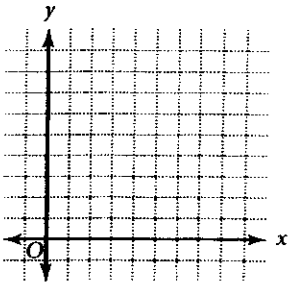
1.2 Slopes and Intercepts

In Exercises 1–3, solve for *y*.

1. $4x + y = 3$ _____

2. $x + 2y = 10$ _____

3. $-3 + 6y = 2x$ _____



4. Graph the points $A(2, 5)$, $B(3, 7)$, and $C(5, 11)$. Connect the points with a line. Estimate where the line crosses the *y*-axis.

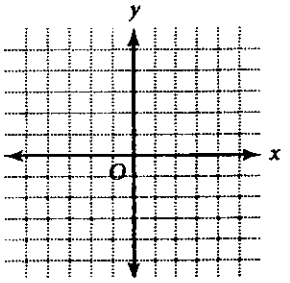
_____

Lesson Quiz (for use after Lesson 1.2)

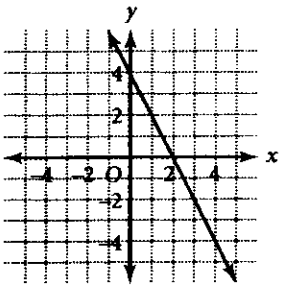
1.2 Slopes and Intercepts

1. Find the slope of the line containing the points $(5, -3)$ and $(-2, 5)$. _____

2. Use the slope and the *y*-intercept to graph the equation $-\frac{3}{4}x + y = 1$.

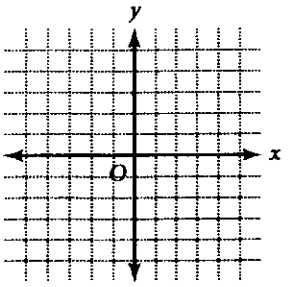


3. Write an equation in slope-intercept form for the line graphed below.

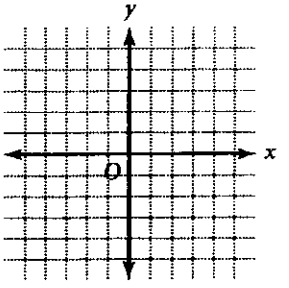


_____

4. Use intercepts to graph $3x - 5y = 15$.



5. Graph $x = 3$.



Review 2 of 3

Quick Warm-Up (for use before Lesson 1.3)

1.3 Linear Equations in Two Variables

1. Find the slope of the line containing the points $(-1, 12)$ and $(5, -6)$.

2. Identify the slope and y-intercept for the line with equation $y = -5x + 7$.

3. Write the equation in slope-intercept form for the line whose y-intercept is 0 and whose slope is -1.

Lesson Quiz (for use after Lesson 1.3)

1.3 Linear Equations in Two Variables

1. Write an equation in slope-intercept form for the line containing the points (2, 4) and (5, 13).

2. Write an equation in slope-intercept form for the line that has a slope of $-\frac{3}{5}$ and contains the point (10, 2).

3. Sam leaves home and drives at a constant speed to his grandparents' house. On his way, he stops at a mall to buy a gift for his grandparents. Four hours after stopping at the mall, Sam has traveled 300 miles from home, and 7 hours after stopping at the mall, he has traveled 465 miles from home. How far is the mall from Sam's house?

Review 3 of 3

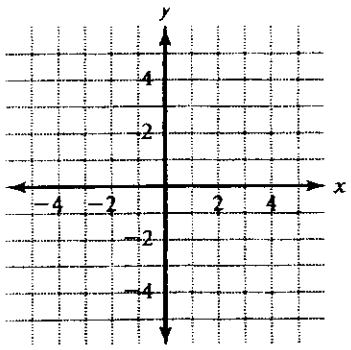
NAME _____ CLASS _____ DATE _____

Practice Masters Level A

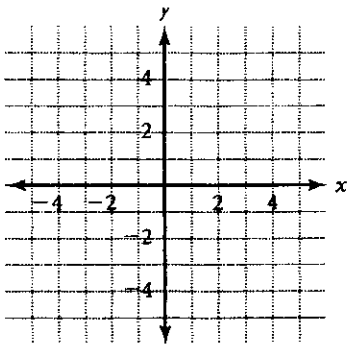
3.3 Linear Inequalities In Two Variables

Graph each linear inequality.

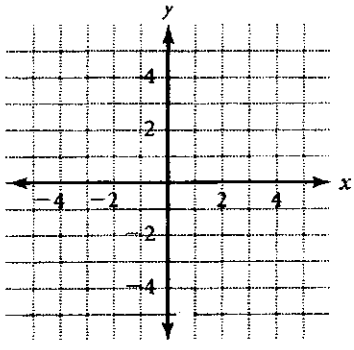
1. $y \geq x$



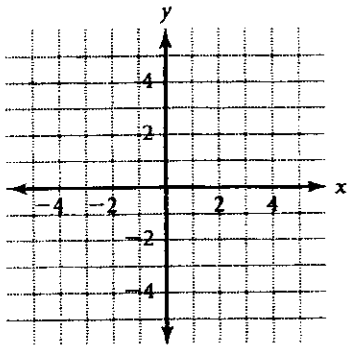
2. $y < 2x + 4$



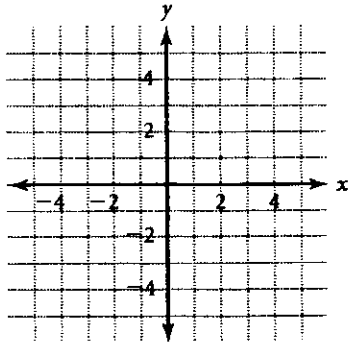
3. $y > -x$



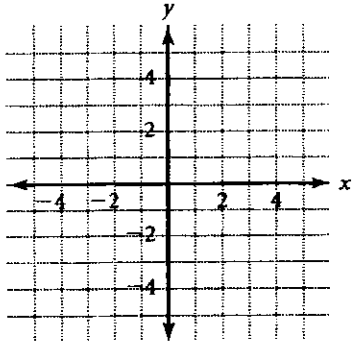
4. $y \leq \frac{-1}{2}x + 2$



5. $3x + y - 5 > 0$



6. $y < -2$

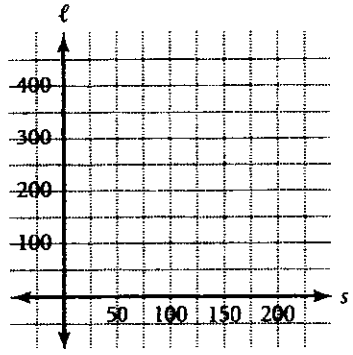


7. For a fund raiser, The Honor Society is selling two sizes of candy bars. They earn a profit of \$1.00 on small candy bars, s, and \$2.00 on large candy bars, l.

a. Write an inequality that represents a profit of at least \$300.

_____

b. Graph the inequality on the coordinate grid to the right.



c. Find three ordered pairs that represent achieving the goal of making a \$300 profit.

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19